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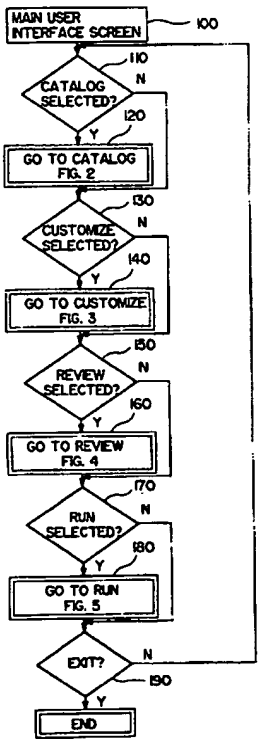
(57) Abstract

A computerized electronic forms generation system for the electronic completion, printing and filing of forms is provided. The user is presented with a catalog of graphically represented form-templates, from which the user selects form-templates to customize. After customization and review, the user has access to a catalog of graphically represented customized forms to complete, modify, file or delete. The electronic forms generation system allows the user to inspect visually the forms and form-templates in various sizes, enabling the user to scale the forms from a full-size representation to an all-on-one screen representation. A "point and click" method, using a display screen, a keyboard and mouse, enables the user (1) to select a form-template and (2) to enter the custom information in answer to the system prompts. The system also manages complex file functions during the completion, filing and printing of the forms without intervention by the user. The system provides for the generation of printed blank or completed customized forms.



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METHOD AND SYSTEM FOR AN ELECTRONIC FORMS GENERATION USER INTERFACE

FIELD OF THE INVENTION

The present invention relates in general to electronic forms generation systems and the electronic creation, completion, printing and filing of forms. In particular, this invention relates to a method and system for selecting a form-template from an existing catalog of graphically represented form-templates, customizing the form-template, thereby creating a personalized catalog of graphically represented customized forms, and thereafter completing and processing these customized forms.

BACKGROUND OF THE INVENTION

In connection with microcomputers and computer work-stations, there are a number of electronic form generation systems available to facilitate the task of creating electronic forms, completing these forms and then printing, filing or otherwise processing these forms. These prior art systems for the creation of electronic forms require the use of complicated multi-step instruction sets. On the basis of training and experience in using sophisticated instructions, rules and protocols, the user learns to create these forms utilizing electronic tools.

Some such systems include sample forms. First, sample forms must be located by using a complex filing system. After locating the sample forms, they must be examined to determine their suitability for the intended purpose. Any generic name and address references must be removed and replaced with the user's customized information. The user then gives this new customized form an identifying name, which is later employed to retrieve it from the system. Third, the newly completed

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form is re-filed through the same complicated file-naming convention originally used to locate it.

To re-access these customized forms, the user must be familiar with the system's file-naming conventions and must remember the name assigned to each customized form. Without the name, the user may have to recall and review every form stored in the system. These processes demand significant amounts of education by the user and also require numerous keystrokes to proceed through the program to achieve the desired result.

Some forms-generation packages which use these conventions are JetForm™ form generation software from JetForm Corporation, PerForm Pro Plus™ form generation software from Delrina Technology Incorporated, FormWorx™ from Spinnaker Software Corp., Informs™ from Word Perfect Corporation and Windform™ from Windform Corporation.

SUMMARY OF THE INVENTION

Accordingly, an object of the present invention is to provide an improved forms generation method and system in which a personal-computer user, who lacks experience or training with said system, may (1) select form-templates from a catalog of graphically represented pre-designed form-templates, (2) customize these form-templates with name, address, phone number and other custom information in order to (3) create a catalog of customized forms. Once created, this graphically represented catalog readily allows for the selection of customized forms along with the completion, printing, filing and deletion of the customized forms.

A further object of the invention is to provide the user with an interface which enables the user more easily to generate, complete and file forms.

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Additionally, an object of the present invention is to create an electronic forms generation system that uses available complex forms generation software as the basis for the improved electronic forms generation systems of the present invention.

A further object of the present invention is to enable the user of an electronic forms generation system to visually inspect the forms and form-templates in various sizes, enabling the user to scale the forms from a full-size representation to an all-on-one-screen representation.

The electronic forms generation system of the present invention consists of hardware and software. An electronic forms generation system according to the present invention would require, at a minimum, a personal computer, personal workstation, microcomputer or equivalent with an 80386 microprocessor or equivalent and at least 4MB RAM and storage capacity of at least 40MB. An operating system under which the software of the present system operates is Windows™ from Microsoft Corporation or an equivalent graphical user interface such as OS2 from IBM, System 7.0™ from Apple Corporation or NextStep™ from NEXT Corporation. Additionally, a complex electronic forms generation software package such as JetForm™ form generation software from JetForm Corporation, PerForm Pro Plus™ form generation software from Delrina Technology Incorporated, FormWorx™ from Spinnaker Software Inc., Informs™ from Word Perfect Corporation or WindForm™ from Windform Corporation is used as part of the system. One skilled in the art could develop an electronic forms generation system, providing through his or her own software, functions similar to those provided by the commercial software application packages described above.

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The electronic forms generation system presents to the user a catalog of graphical representations of the form-templates. A "point and click" method, using a display screen, a keyboard and mouse, enables the user (1) to select a form-template and (2) to enter the custom information in answer to the system prompts. The system itself manages the sophisticated functions; it assembles a custom catalog of graphically-represented form-templates and combines the customizing information with each form-template. Therefore, the ordinary computer user is not required to understand complex programming techniques or to comprehend sophisticated instruction sets or program rules and conventions.

Further, the size of the graphical representations displayed in the forms system can be adjusted by the user from full size to an all-on-one-screen reduced size. This allows the user to create visually and review a form-template in various sizes rather than only a portion of the form-template.

The system also manages the completion, filing and printing of the forms (blank or completed) as required by the user, without intervention by the user. This present system can be used by computer users who are untutored in its use, because it does not require the learning of difficult or complex user interface commands, rules or conventions, such as those required for filing and retrieving forms in the prior art systems.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a flow diagram depicting the flow of system control from the main user interface in an embodiment of the present invention.

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FIG. 2 is a flow diagram depicting the catalog function as implemented in an embodiment of the present invention.

FIGS. 3A and 3B are flow diagrams depicting the customize function as implemented in an embodiment of the present invention.

FIG. 4 is a flow diagram depicting the review function as implemented in an embodiment of the present invention.

FIG. 5 is a flow diagram depicting the run function as implemented in an embodiment of the present invention.

FIG. 6 is a depiction of the main user interface screen as implemented in an embodiment of the present invention.

FIG. 7 is a depiction of the form-template catalog as implemented in an embodiment of the present invention.

FIG. 8 is a depiction of the customize user interface screen as implemented in an embodiment of the present invention.

FIG. 9 is a depiction of the logo selection screen as implemented in an embodiment of the present invention.

FIG. 10 is a depiction of the layout selection screen as implemented in an embodiment of the present invention.

FIG. 11 is a depiction of the review screen as implemented in an embodiment of the present invention.

FIG. 12 is a depiction of the custom catalog as implemented in an embodiment of the present invention.

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DETAILED DESCRIPTION OF THE INVENTION

In a preferred embodiment of the present invention an electronic forms generation system includes a central processing unit, a memory, a user data input device, a data display device, a data storage device, a printer, a computer operating system, an electronic forms generation software application and a software-implemented user interface. The user interface, in conjunction with the hardware described above, presents to a user a catalog of graphically represented form-templates. The user is provided an interface with which to graphically review and select form-templates for a custom form catalog. The selected form-template is then customized by the user. The customized form is graphically reviewed by the user and, if approved, becomes part of the user's custom form catalog. The customized forms from the custom form catalog can then be completed, filed, modified or deleted. Completed or blank customized forms can be generated through the printing device.

The electronic forms generation system of the present invention comprises both hardware and software components. An electronic forms generation system according to the present invention would require, at a minimum, a personal computer, personal workstation, microcomputer or equivalent with an 80386 microprocessor or equivalent and at least 4MB Random Access Memory (RAM) and storage capacity of at least 40MB. The storage capacity could be a magnetic disk, such as a hard disk or floppy disk drive and the requisite software drivers. Also, a printer and its associated printer driver is necessary to generate hard-copy printouts of the completed or blank forms.

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The software necessary to operate the system comprises an operating system under which the software of the present system operates, i.e. Windows™ from Microsoft Corporation or an equivalent graphical user interface such as OS2 from IBM, System 7.0™ from Apple Corporation or NextStep™ from NEXT Corporation. Additionally, a complex electronic forms generation software package such as JetForm™ form generation software from JetForm Corporation, PerForm Pro Plus™ form generation software from Delrina Technology Incorporated, FormWorx™ from Spinnaker Software Inc., Informs™ from Word Perfect Corporation or WindForm™ from Windform Corporation is used as part of the system. Alternatively, the underlying complex forms generation package could be developed by one skilled in the art to provide the functions found in the commercial software application packages described above.

The electronic forms generation system of the present invention, as disclosed herein, presents to the user graphical representations of form-templates comprising a catalog of form-templates. The form-template catalog is supplied to the user as part of the system. The system presents to the user electronic forms and form-templates in an environment more like the traditional non-electronic environment, i.e., visually. The system manages the generation of graphical form representations and permits the user to customize forms using a user interface of visual representations. FIG. 1 illustrates the flow of the system from the main user interface screen **100**.

The main user interface screen as depicted in FIG. 6 prompts the user with a series of "buttons." Using the user input devices such as the keyboard or mouse, the user selects a "button" with an electronic

pointer shown on the user interface screen by an arrow and then clicks on the catalog button by depressing a button on the keyboard or mouse. One skilled in the art can appreciate that other devices such as a touch sensitive screen or joystick and keyboard combination could allow the user to "point and click" at various user interface screen "buttons"." The system, waiting for the user input **110, 130, 150, 170**, i.e., the positioning of the electronic pointer and the button depression, reacts by sending control to one of four sub-routines: catalog **120**, customize **140**, review **160** and run **180**.

The first time a user operates the system no custom catalog for the user exists. The system identifies the first time user by determining whether custom forms exist in the system. During the first use of the system by the user, the catalog button is highlighted in some way so as to notify the user that no other function can be selected. Thus, the system prompts the user to create his or her custom catalog. If custom forms exist, then the system has already been used and the first-time user set-up will be bypassed, unless the user specifically requests to run the set-up procedure during a subsequent use of the system. The user exits the program in a preferred embodiment through the exit "button".

Once the catalog "button" is selected by the user, the system presents the user with a catalog of graphically represented forms. FIG. 7 depicts one possible configuration of the catalog of form-templates with which the user is presented.

FIG. 2 depicts the flow of the system during use of the catalog function **120**. The user reviews the displayed graphical catalog **225**, by viewing various pages of the catalog **230** and selects a form-template category

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240 by pointing and clicking on a graphical representation of a form-template within a category. Prior to selection, additional pages of the form-template catalog may also be viewed by the user 230. The name of the category is included in the graphical representation.

Upon selection of the category, the user is presented with multiple choices of form-templates 245 within that category, each being distinctive in its appearance and usage. For example, in a category entitled "Fax cover sheets" entries might appear for 8 1/2 inch by 11 inch, legal sized, portrait, or landscape facsimile cover sheets. Each form is represented by an accurately scaled graphical representation of the form with a brief description of the type of form which it represents. The user can select 250 any of the choices by pointing and clicking on that graphical representation using the electronic pointer controlled by the mouse and a button on the keyboard or mouse. The choice is then scaled to a larger size and displayed.

The user is provided different form size choices from actual size to a reduced but recognizable size depicting the entire document 260. The user is also provided with "point and click" screen buttons allowing for the navigation around and review of all parts of the form.

After sufficiently examining the form-template and being satisfied with the choices, the user points and clicks the select button to select the form-template for the user's custom catalog. The system then marks 270 that form-template as being selected for the custom catalog, and the program returns the user automatically to the main catalog screen 225. On that screen, the user is notified that he has selected a form-template for that category. The process is continued on a category-by-

category basis, allowing the user to select or bypass any of the offered categories and the form-templates therein until the user has completed the review **280**.

At the end of the process, the user is returned to the main screen **290**. The system acknowledges that the user has finished with the review of the catalog process and notifies the user by modifying the catalog "button" or placing a check next to the catalog "button", and prompts the user to select the next step, "customize" **140**.

FIGS. 3A and 3B are diagrams that depict the flow of the system during the customize process. The user points and clicks the customize button and is presented with a screen in which he is asked to enter his corporate name **310**. FIG. 8 depicts the user interface screen for the customize function in one embodiment of the present invention. Once the user has input the corporate name, the system provides the user with type style choices **312**. The user is presented with the names of the type styles on the screen next to the corporate name. The user may point and click on any type style and the system automatically changes the previously typed name into that type style **314**. Thus, each type style may be visually reviewed by the user permitting the user to select the appropriate type style **316**.

The next user interface window of the customize interface screen prompts the user for the address, zip code, and the pertinent telephone, facsimile or other numbers **320**. The user then again selects the appropriate type style using the previously described method **322**, **324**, **326**. The name and the address type styles may be different from each other.

After inputting the name and address and selecting the type style, the user is offered the option

to select a logo **330** by the using the "point and click" method on the "select logo" button depicted on the user interface screen. The user interface then presents the user with a new screen giving the user a number of "point and click" buttons on the screen allowing the user to choose various methods of inputting a logo **332**. FIG. 9 is a depiction of the logo selection screen of one embodiment of the present invention. The first choice is to select a standard logo **340**. Upon selecting that "button", the user is given a selection of pre-drawn generic logos with representations of different industries, professions, locales, animals, plants or other various logo selections **342**. The user can choose any of these standard drawings by using the previously described "point and click" method **344**. The system then stores the logo selection for the form-template **346**.

The next logo "button" selection allows the user to import a custom graphic of the user's own logo from the disk drive **350**. These custom logos have been either drawn or scanned into any of several acceptable standard computer conventions and put on diskette, magnetic hard disk, CD-ROM (optical disk) or other data storage medium. The method for loading this information into the computer is to insert the storage medium into the computer if necessary and type a command which causes the computer to load the information from the medium into the system **352**. The third choice is to allow users of Windows™ operating system software to import a file containing a logo which would previously have been placed in the imported files by the user **360**. The imported file could be brought into the Windows™ operating system environment from a magnetic or optical storage media, drawn in the environment with a drafting package or scanned into the Windows™ operating system environment.

In either case the user must input a file name, **352 or 362** and the system must store the file for the custom or windows logos **354 or 364.** The fourth selection is for "no logo", meaning that no custom logo will be inserted on the form **370.**

Once the logo selection has been completed, a screen showing the name, address, type styles and logo is displayed and the user is presented with a "continue" button. The "continue" button is pressed (through the "point and click" technique) and the user is then provided with a selection of layouts **380** in which the user's name, address and numbers as well as the logo are depicted together with various spatial relationships so as to allow the user to custom select the appearance which is most pleasing to the user. FIG. 10 is a depiction of the layout screen of one embodiment of the present invention. The graphical depiction of a number of spatial relationships enables the user to customize the form-template without having to use a complex set of electronic tools.

Any reduced-size customized spatial relationship can be reviewed full size by pointing and clicking on the button which contains the graphical representation of the spatial relationship. The appropriate spatial layout is selected **385** through "point and click" and the user is then returned **390** to the main screen **100.**

The main user interface screen then indicates that the user has completed both the "catalog" and "customize" sections of the system and is prompted to select "review" **160.** The user points and clicks the "review" button and a user interface screen is displayed showing the review screen with each previously selected form-template represented in a reduced but accurate

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graphical representation of the actual form with custom information. FIG. 11 is a depiction of one possible review screen presented to the user in a preferred embodiment of the present invention. During the review process, the custom catalog includes a place to mark those documents reviewed by the user.

FIG. 4 is a diagram of the system flow during the review process. Each form in the displayed custom form catalog **410** includes the appropriate category name inserted on the button with the form. By selecting **412** a form "button" the user is presented with a graphical representation, all on one screen, of the form **416** including the user's custom information. All information is properly laid out and sized to fit the form. The user is presented with an additional on-screen "button" permitting the user to review the form in various sizes from actual size to the entire form on one screen **417, 418**. The user may also further customize the form by enlarging or reducing the size of the custom information **420, 430** as well as its position on the form **440, 450**.

After selecting the appropriate sizes and locations and selecting the number of copies to print **455**, the user can elect to approve the form **460** at which time the system marks the form approved **470**. The program then provides the user with the next form for the same process **480**. Alternatively, the user is given the option to review each form before approving any of the forms by clicking a "next selection" button. Once all the forms have been approved, the program automatically returns the user **490** to the main user interface screen **100**.

At this point, the user has provided all the necessary information and made the necessary choices so as to create his own catalog of customized forms and has reviewed the forms. The program acknowledges that he has

completed the first three steps and prompts him to proceed to the fourth step "run" **180**. From this point forward, when the user selects the "run" button, the system automatically retrieves the user's customized form catalog from secondary storage, such as the hard disk drive of the system. If, at some time in the future, the user desires to add a form, delete a form, or re-customize a form, the user can then go through the previously described "set-up" procedure again. Unless such a change is requested, the system presents the user with the customized forms catalog. FIG. 5 depicts the flow of the system during the run function. After selecting the "run" button, the user is presented with the custom form catalog **510** of graphical representations of the customized forms in accurate but reduced form. FIG. 12 depicts one possible custom form catalog that is presented to the user in a preferred embodiment of the present system. Using the point and click method the user can select a graphical representation of a form category **512**.

The user is then presented with a user interface screen containing two buttons: one for selecting blank forms and a second for selecting completed and filed forms. The blank forms "button" is a small graphical depiction of the blank form **524** in a preferred embodiment of the present invention. The filed forms "button" is a small graphical representation of a file folder **522** in a preferred embodiment of the invention. By clicking on the blank form **524**, the user selects the option of completing a blank form **530** and is presented with a blank customized form, in full-size **532**. Every field of the form can be completed by the user. The completion data is collected **534** and stored **536** by the system in memory or the data storage device. The

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first field is selected and each subsequent field is automatically selected once the previous field has been completed.

By selecting the file folder **538** the user is presented with a selection of previously filed forms that reside in that file folder **539**. The user may then retrieve one of these completed form **540** which is then displayed by the system **541**.

Additional "buttons" allow the user to either print **550**, delete **560** or file **570** the completed form. To print the form, the user simply presses the print "button". The system will automatically print one form unless the user selects a different default number to be printed. If desired, the form can be printed in blank before it is completed or it can be printed after being completed. The completion data template and custom data form will print together simultaneously **552**. There is no need for the user to specify separate data and form files in the system for printing. The data files are then merged **554** and sent to the printer **556**.

When the user wishes to file **570** a completed or modified form, the user selects the file button and is prompted with a window which requests him to specify a descriptive name **572** for the completed form. The user types in a name for the completed form and indicates that he is done, at which point the form is automatically filed in the system's file cabinet, i.e., magnetic or read/write optical storage. The form is automatically filed in a folder marked by the descriptive name of the form category, i.e., "facsimile cover sheets", or "expense reports". The descriptive name is preferably on or near the file folder or its "button". All related data files for the completed form are stored by the

system **574**. Thus, the user need remember only one descriptive file name to recall a completed form.

To locate a previously filed form, the user first determines the category of form from the main custom catalog selection screen **510** and selects a form category **530**. The user is then given a choice of selecting a blank form **530** or filed forms **538** in the file folder within that category. When selecting the filed forms, the category of the file folder is displayed open with an accurately reproduced miniature graphical representation of each filed form with the file name displayed within the button image of that form. In a preferred embodiment the file name is placed on the filed form button. Alternatively, the name of the form should be placed near the filed form button to which it refers. By clicking on the graphical representation, the form is automatically retrieved **540** and displayed to the user **541**. The user then has a choice of printing **550** the form, filing the form **570**, modifying **542** the completion data for that form or deleting the form **560** by clicking on the form "throw-out" button. In filing the form **570**, the user is prompted for a descriptive file name which is used to identify the document **572**. Upon completion, the user may elect to return to the main screen **590** by pointing and clicking on the "back to steps" button.

A preferred embodiment of the present invention provides the user with a pre-customized catalog of graphically represented forms. This system enables the user to complete forms with user data, file the forms and print the forms without requiring the user itself to customize the forms. Thus, this embodiment of the forms generation system provides the user with a limited set of functions, simplifying the user interface to a greater

degree than the other preferred embodiment described herein.

The user is presented with the same type of graphically reprinted forms. However, rather than form-templates, which the user must customize, this embodiment of the system supplies the user with pre-customized forms. The user selects the pre-customized form to complete. The form is then retrieved automatically by the system and the user is presented with data fields for the input of form completion data. The completed form may then be filed, deleted, or printed by the user as with the first embodiment. FIG. 5 depicts the flow of data during use of this embodiment of the system and FIG. 12 depicts one possible custom catalog of graphically represented custom forms which would be presented to the user in this preferred embodiment of the system.

The foregoing description of the invention describes only two of the preferred embodiments of the present invention. It should be appreciated that modifications could be made by those skilled in the art to the embodiment described herein and that such modifications would still result in a system that is within the scope of the invention as claimed below.

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CLAIMS

1. An electronic forms generation system, including a central processing unit, a memory, a user data input device, a data display device, a data storage device, a printer, an operating system, electronic forms generation application software and a software-implemented user interface including:

means for presenting to a user a catalog of graphical representations of form-templates;

means for graphically reviewing and selecting form-templates;

means for customizing selected features of the selected form-template to create a customized form;

means for graphically reviewing the customized form;

means for completing a customized form; and

means for generating blank and completed customized forms.

2. The electronic forms generation system of claim 1 wherein the means for reviewing the form-templates and customized forms includes means for scaling the graphical representation of the form or form-template.

3. The electronic forms generation system of claim 1 wherein the system includes means for printing forms and a means for storing completed forms.

4. The electronic forms generation system of claim 1 wherein the system includes means for inputting form completion data.

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5. The electronic forms generating system of claim 4 including means for merging the customized form with the form completion data file without user intervention.

6. An electronic forms generation system, including a central processing unit, a memory, a user data input device, a data display device, a data storage device, a printer, a computer operating system, electronic forms generation application software and a software-implemented user interface including:

means for presenting to a user a catalog of graphical representations of customized forms;

means for reviewing the customized forms; and

means for generating blank and completed customized forms.

7. The electronic forms generation system of claim 6 including means for scaling the graphical representation of the form.

8. The electronic forms generation system of claim 6 including means for printing forms and a means for storing completed forms.

9. The electronic forms generation system of claim 6 including means for inputting form completion data.

10. The electronic forms generating system of claim 9 including means for merging the customized form with the form completion data file without user intervention.

11. An electronic forms generation method comprising the steps of:

presenting the user with a catalog of graphical representations of form-templates;

allowing the user to review and select a form-template;

presenting the user with selected features of the selected form-template;

allowing the user to customize the selected features of the form-template;

presenting the user with a graphical representation of the customized form-template for review and modification of the customized features in order to generate a customized form;

allowing the user to select a customized form;

allowing the user to complete form data fields on the selected custom form;

generating the completed customized form;

printing the completed form; and

filing of the completed form.

12. The electronic forms generation method of claim 11, including the steps of:

retrieving the form-template;

retrieving the customization data;

retrieving the form completion data; and

merging the form-template, customization data and form completion data without user intervention.

13. An electronic forms generation method comprising the steps of:

presenting the user with a catalog of graphical representations of customized forms;

allowing the user to review a set of customized form;

allowing the user to select a customized form;

allowing the user to complete form data fields on the selected customized form;

generating the completed customized form;

printing the completed form; and

filing the completed form.

14. The electronic forms generation method of claim 13, including the steps of:

retrieving the form-template;

retrieving the customization data;

retrieving the form completion data; and

merging the form-template, customization data and form completion data without user intervention.

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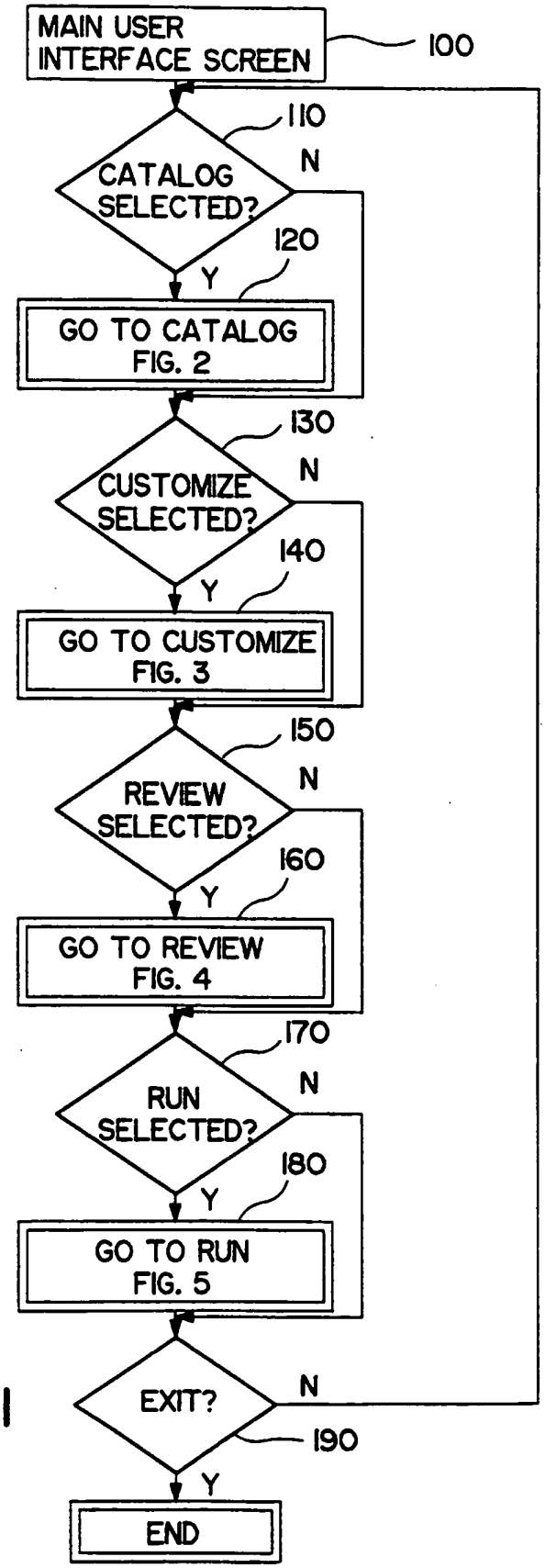

FIG. 1

11/12/06, EAST Version: 2.1.0.14

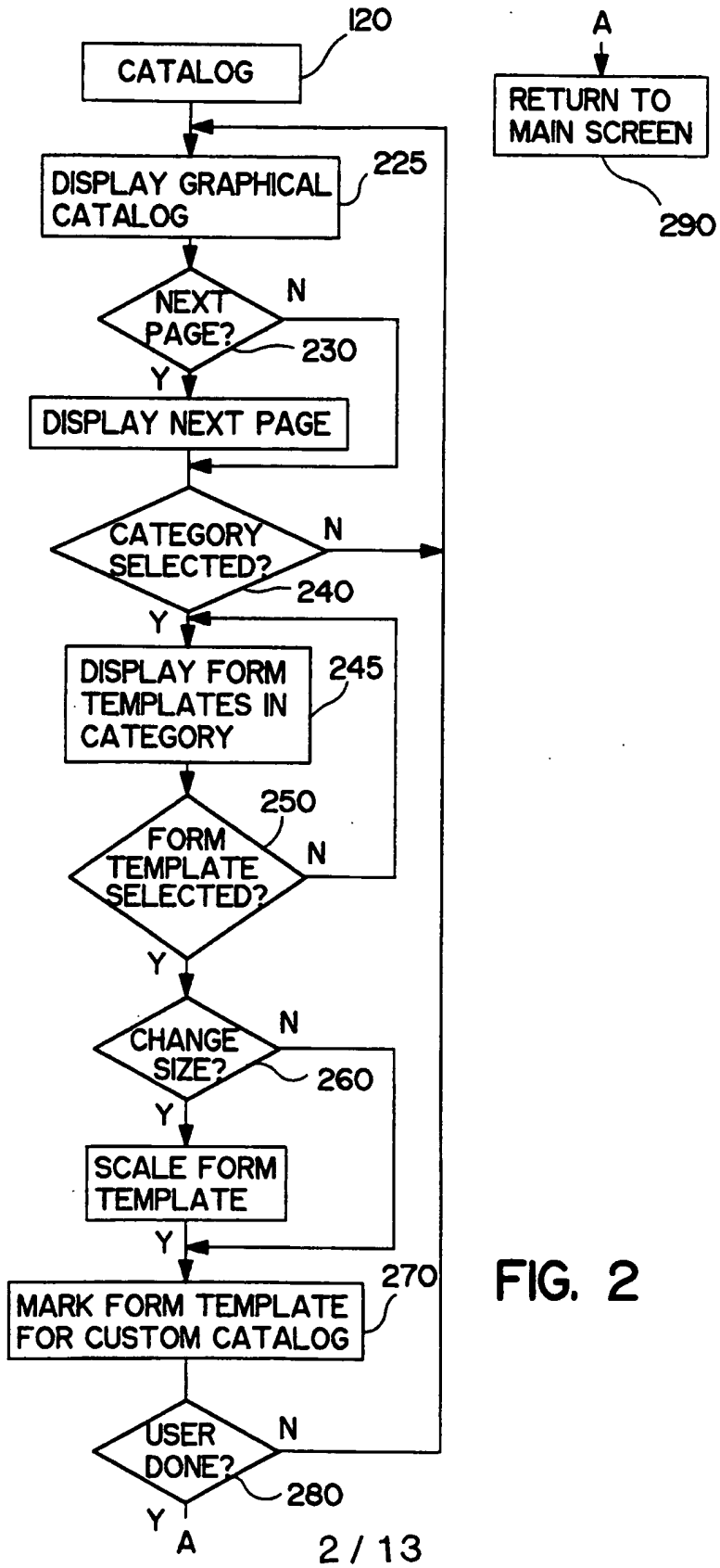

FIG. 2

11/12/06, EAST Version: 2.1.0.14

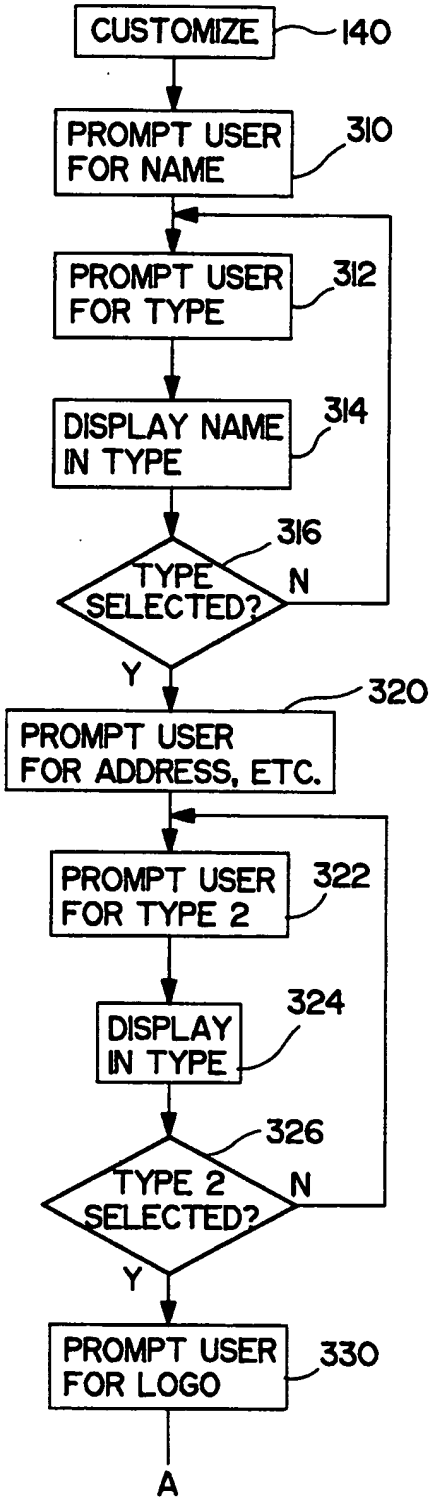

FIG. 3A

11/12/06, EAST Version: 2.1.0.14

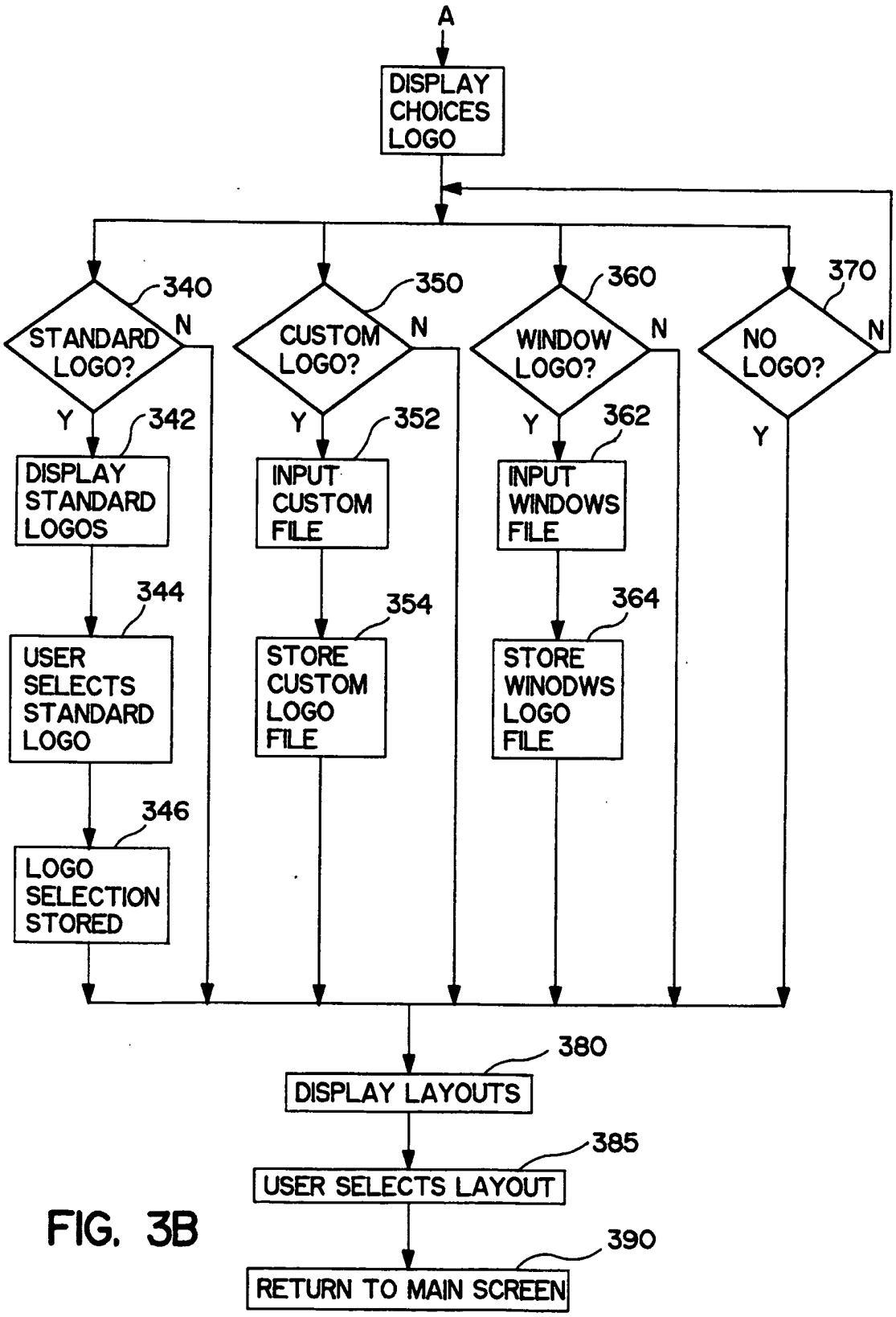

FIG. 3B

11/12/06, EAST Version: 2.1.0.14

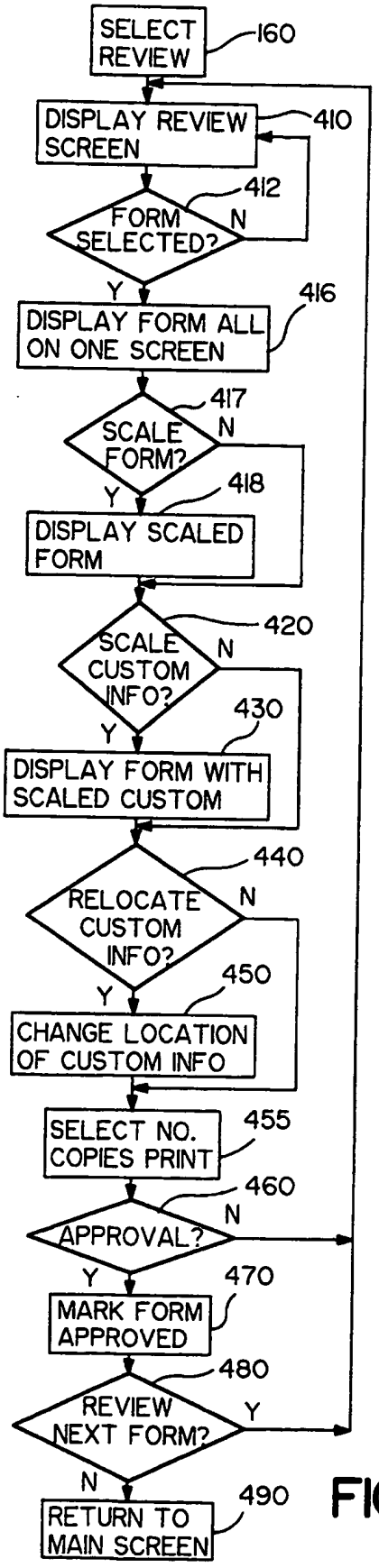

FIG. 4

11/12/06, EAST Version: 2.1.0.14

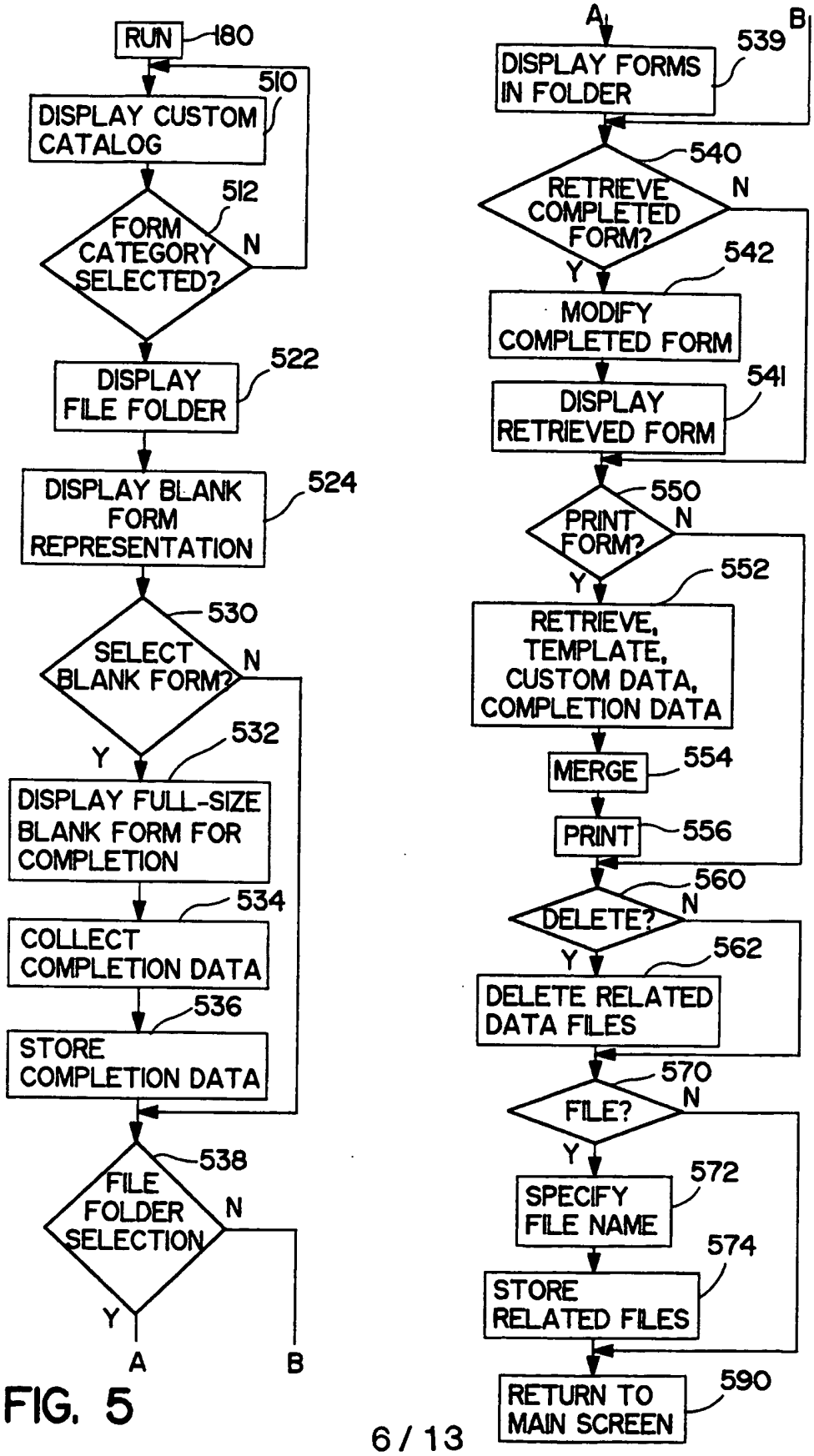

FIG. 5

11/12/06, EAST Version: 2.1.0.14

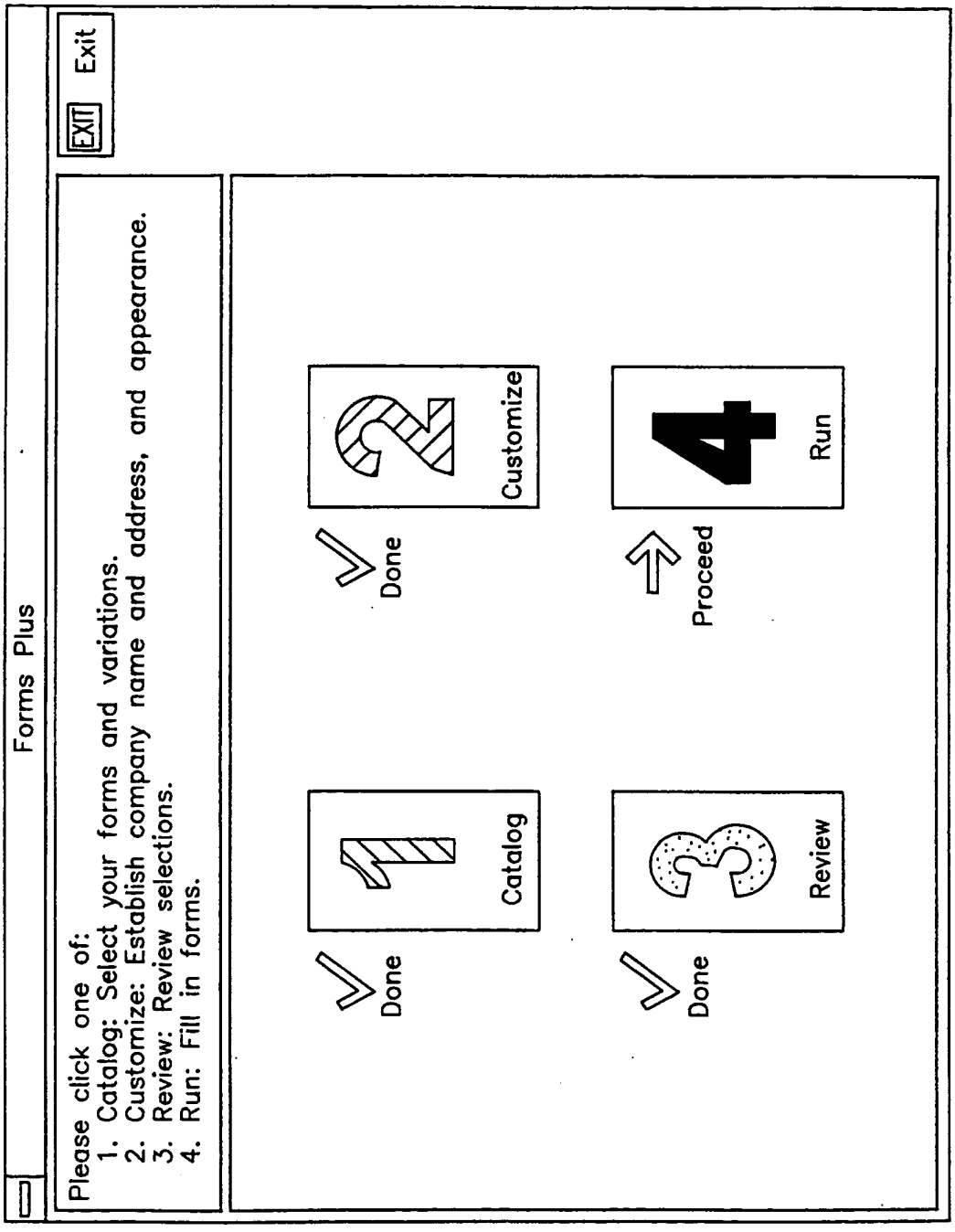

FIG. 6

11/12/06, EAST Version: 2.1.0.14

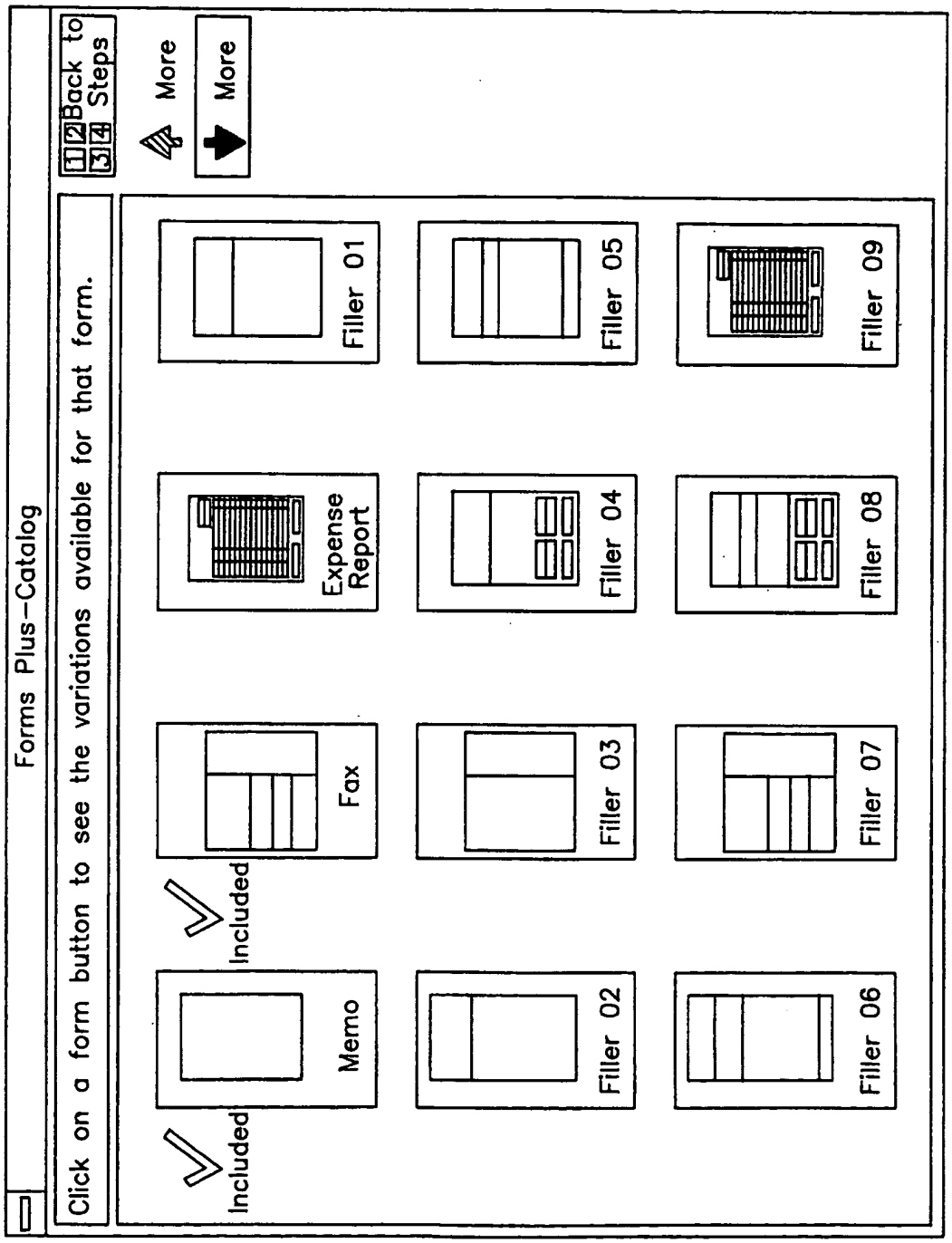

FIG. 7

11/12/06, EAST Version: 2.1.0.14

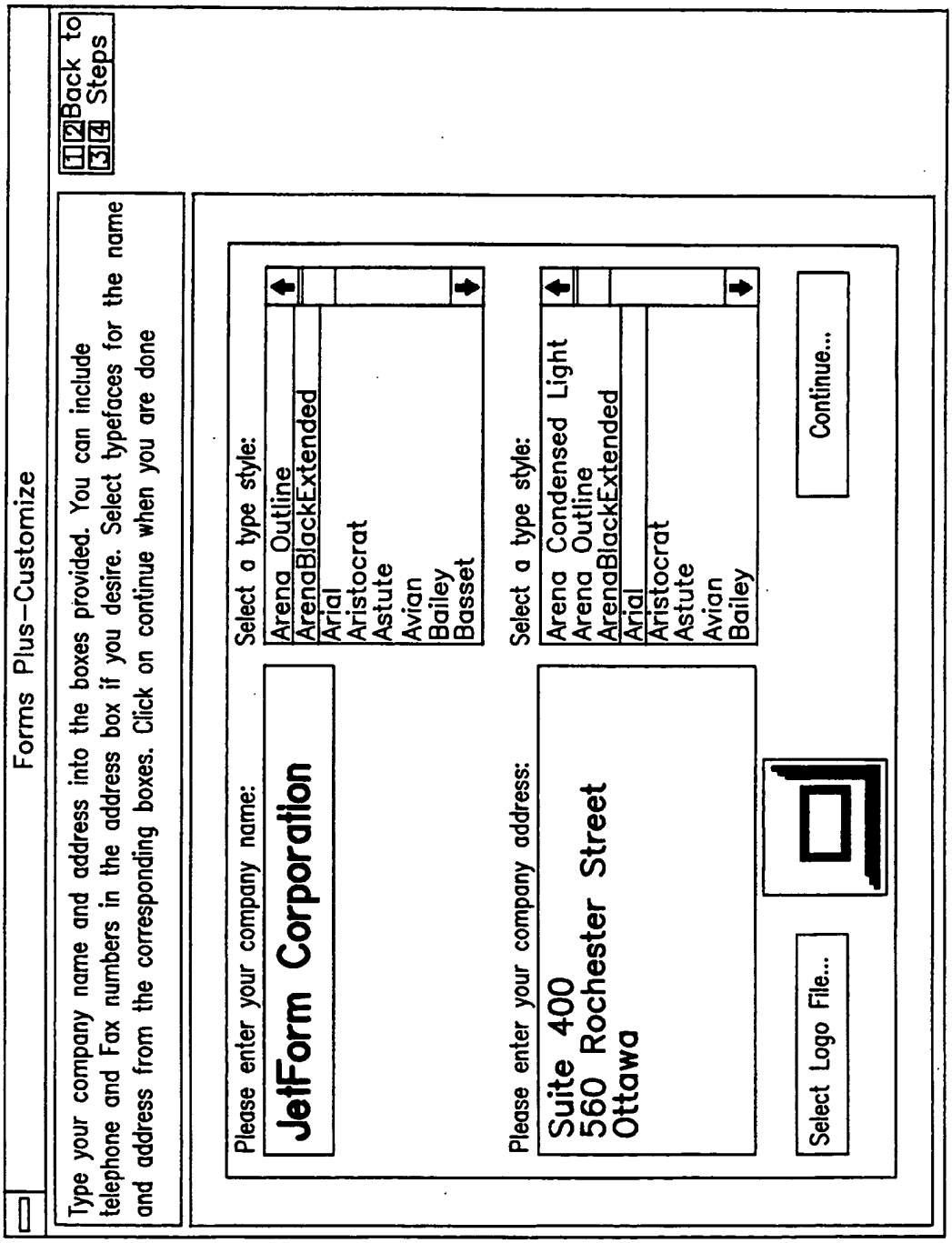

FIG. 8

11/12/06, EAST Version: 2.1.0.14

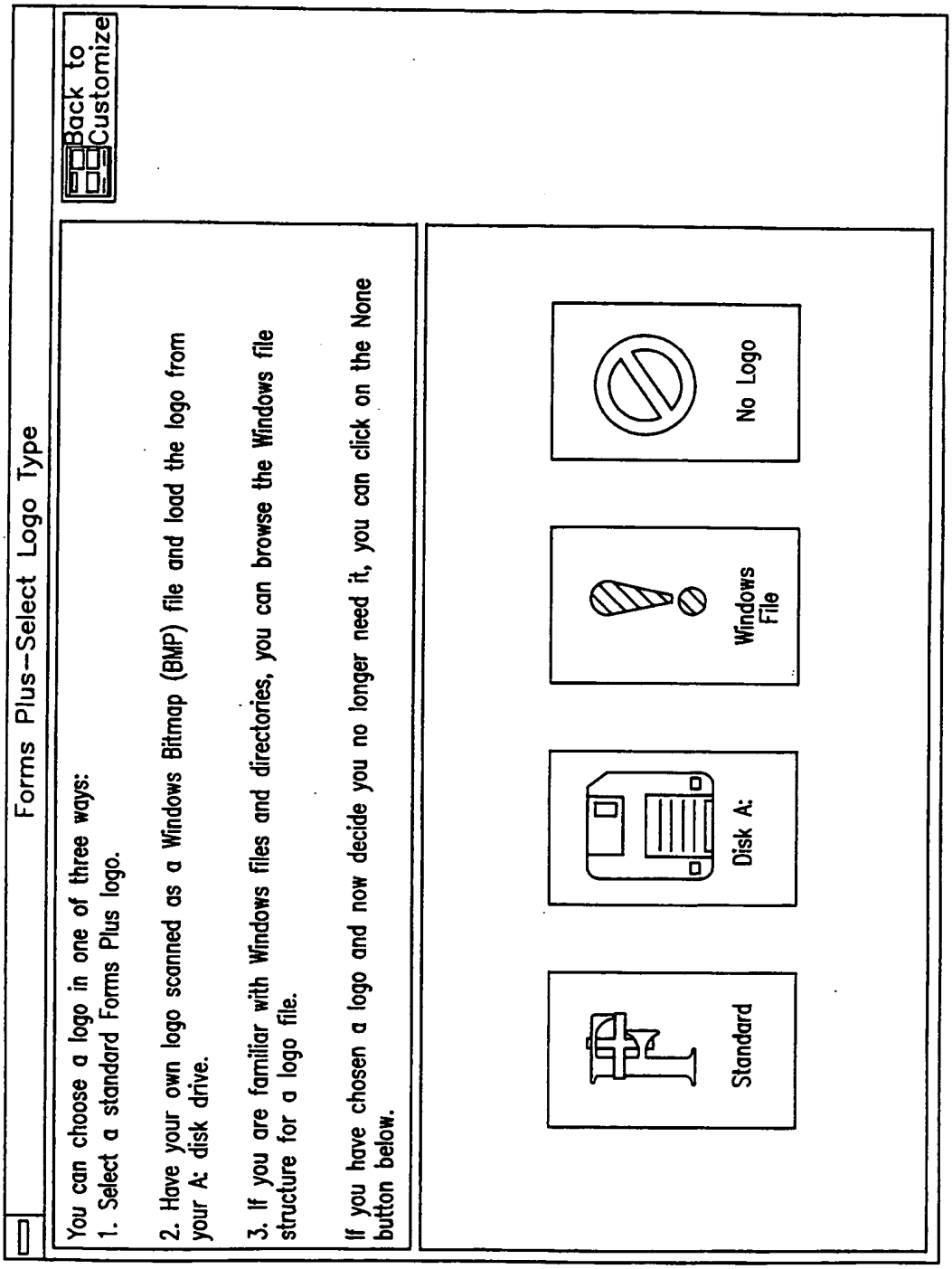

FIG. 9

11/12/06, EAST Version: 2.1.0.14

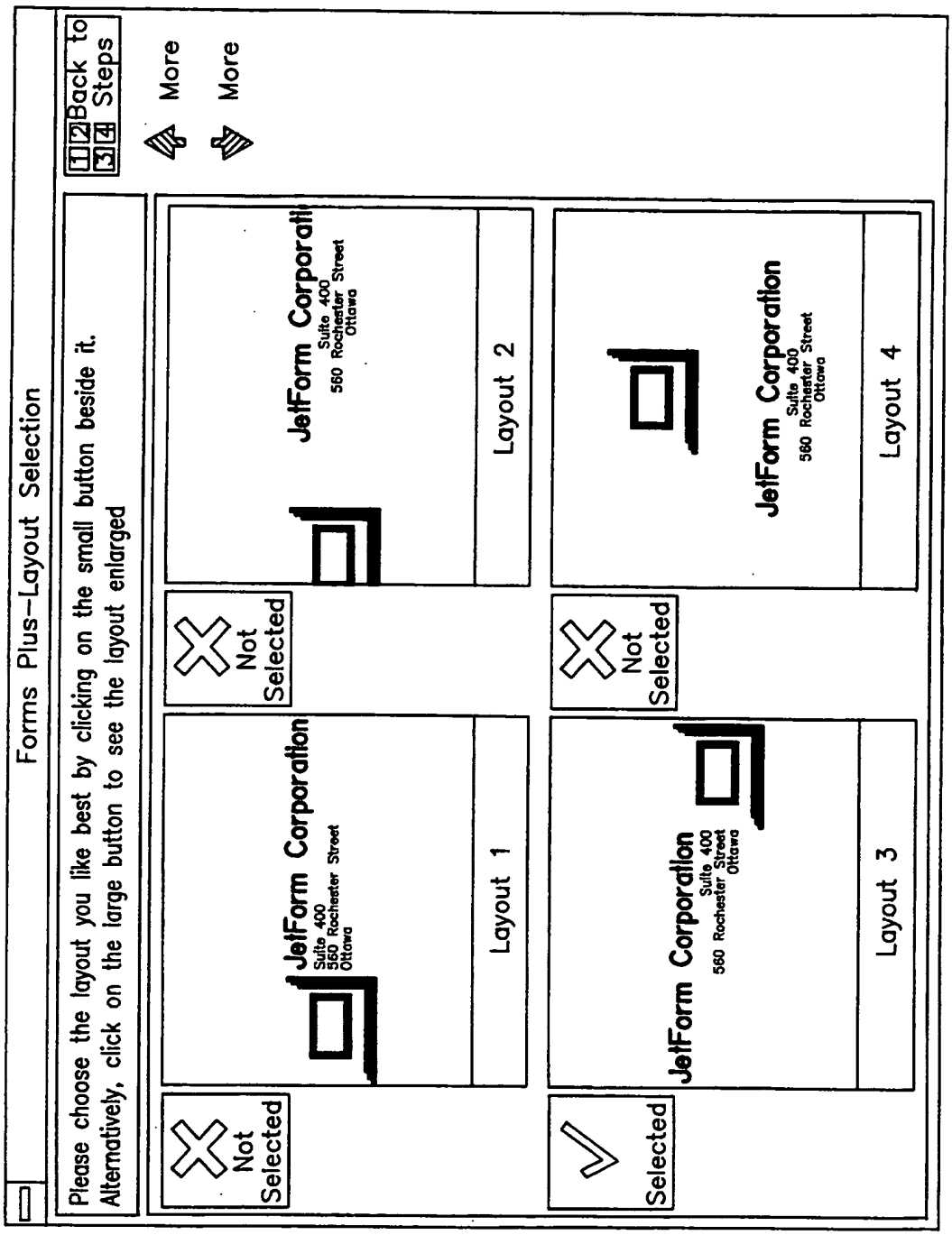

FIG. 10

11/12/06, EAST Version: 2.1.0.14

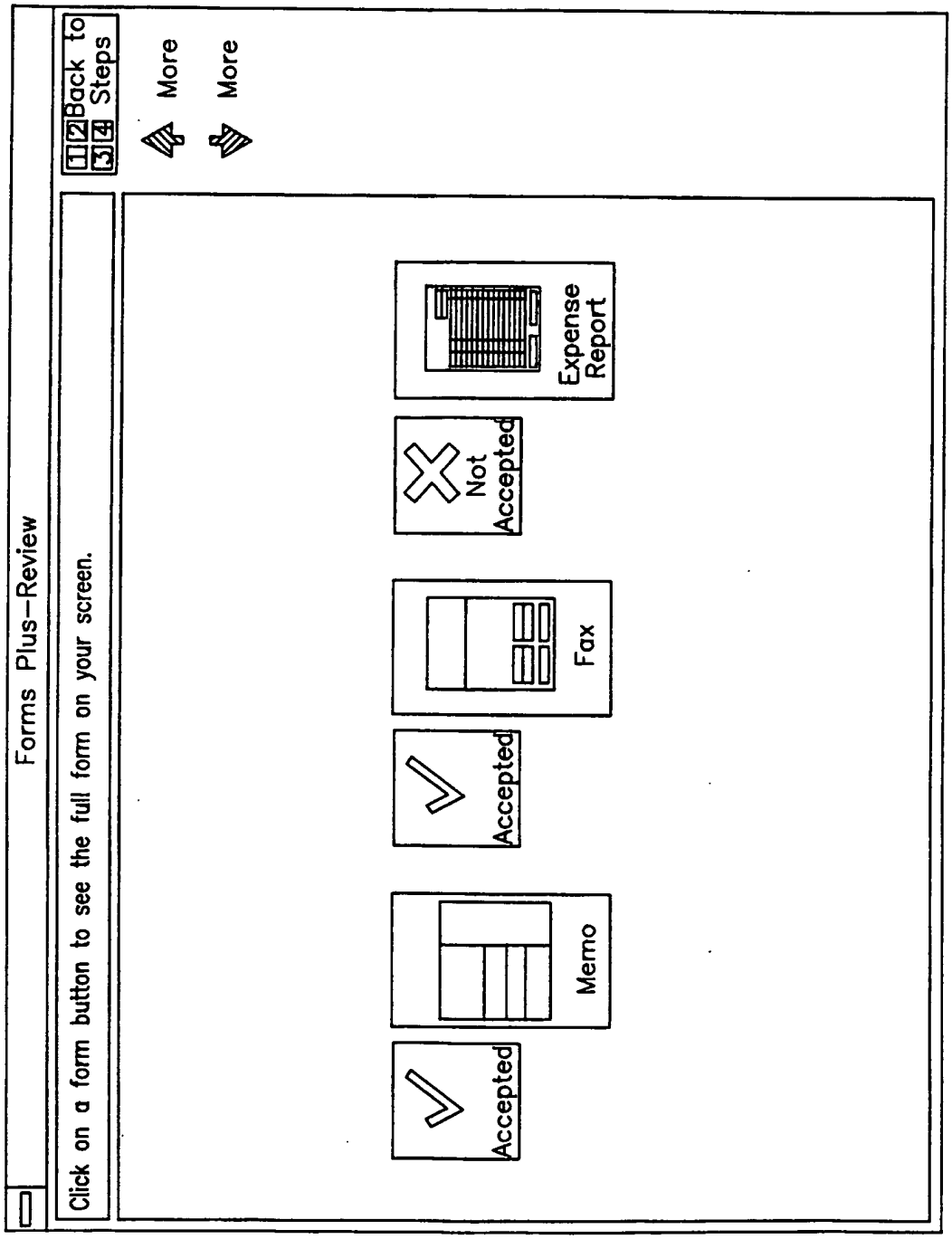

FIG. 11

11/12/06, EAST Version: 2.1.0.14

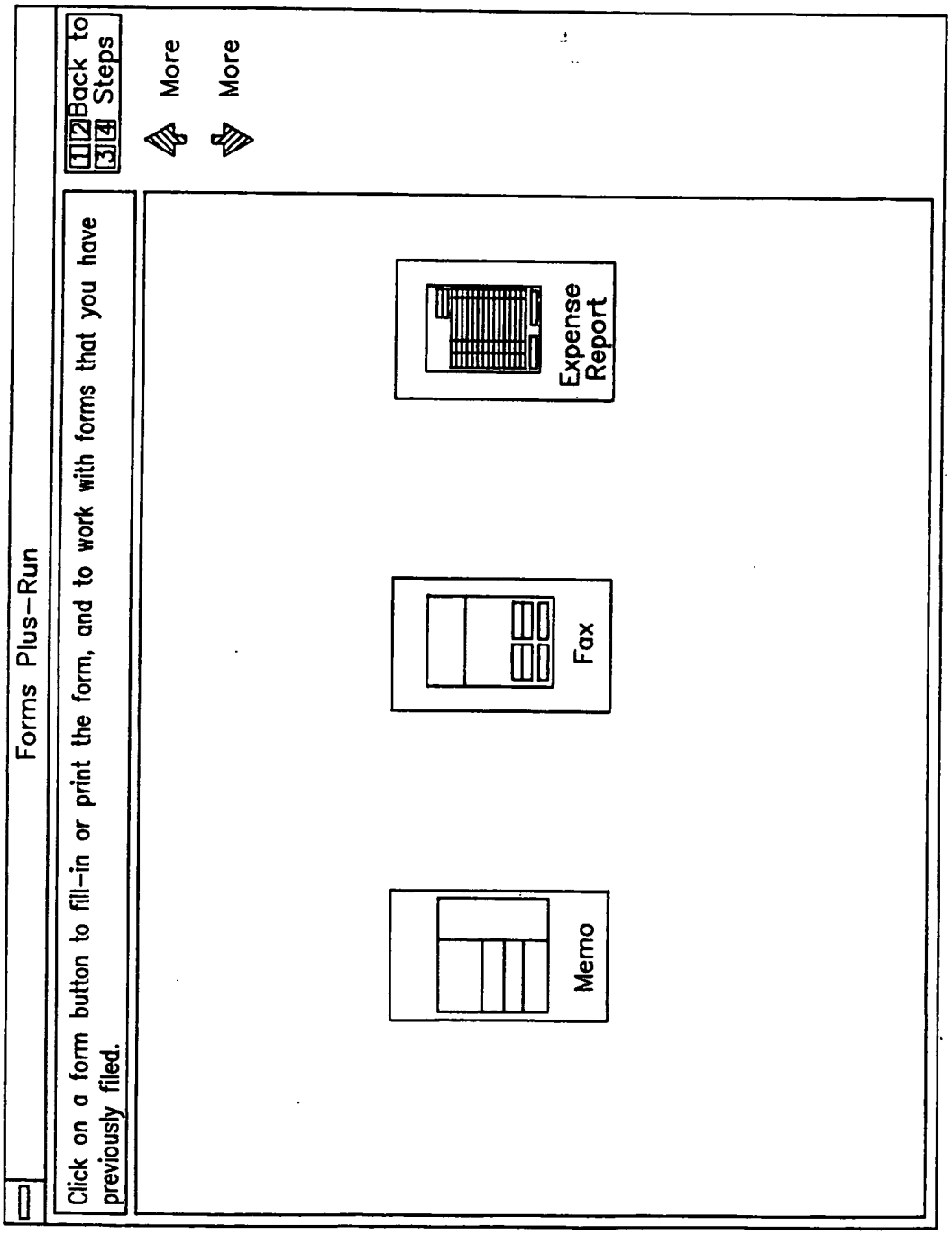

FIG. 12

11/12/06, EAST Version: 2.1.0.14

INTERNATIONAL SEARCH REPORT

Internal Application No
PCT/US 94/10236

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 G06F17/24

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PROCEEDINGS OF THE 14TH ANNUAL INTERNATIONAL COMPUTER SOFTWARE & APPLICATIONS CONFERENCE, 1990, CHICAGO, US pages 255 - 260, XP000223616 T.J. FAN ET AL 'FormPlus: A Form Authoring Toolkit' see the whole document ---	1,3,4,6, 8,9,11, 13
X	EP,A,0 481 784 (MOORE) 22 April 1992 see page 2, line 37 - page 3, line 30 ---	6,8,9
A	EP,A,0 478 335 (XEROX) 1 April 1992 see the whole document ---	1-14
A	EP,A,0 483 664 (BORLAND) 6 May 1992 see page 2, line 30 - page 3, line 26 --- -/--	1-14

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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"O" document referring to an oral disclosure, use, exhibition or other means

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Date of the actual completion of the international search	Date of mailing of the international search report
23 December 1994	06.01.95

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+ 31-70) 340-2040, Tx. 31 651 epo nl, Fax (+ 31-70) 340-3016	Pottiez, M

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INTERNATIONAL SEARCH REPORT

Internal Application No
PCT/US 94/10236

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP,A,0 376 420 (SOFTVIEW) 4 July 1990 see column 3, line 19 - column 4, line 14	1-14

1

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INTERNATIONAL SEARCH REPORT

Information on patent family members

Internal Application No
PCT/US 94/10236

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
EP-A-0481784	22-04-92	AU-B-	4895693	23-12-93
		AU-A-	8596591	30-04-92
		JP-A-	4282275	07-10-92
EP-A-0478335	01-04-92	CA-A-	2048794	29-03-92
		JP-A-	4299662	22-10-92
EP-A-0483664	06-05-92	CA-A-	2054026	01-05-92
EP-A-0376420	04-07-90	US-A-	5144693	01-09-92
		AU-A-	4700189	05-07-90
		CA-A-	1330123	07-06-94
		JP-A-	3110665	10-05-91
		US-A-	5208906	04-05-93
		US-A-	5148520	15-09-92

11/12/06, EAST Version: 2.1.0.14